

What is claimed is:

1. A method for breeding transgenic plants with high antiviral property, comprising the following steps of:
 - 5 a. checking the frequency of codon usage in a host and determining the rare codons in the host, modifying the codons in a target gene so that some codons in the target gene are mutated into the rare synonymous codons in the host plant;
 - b. constructing a vector containing the target gene with the codon modifications, to be used for transforming plants;
 - 10 c. transforming the plants with the recombinant vector to obtain the regenerative transgenic plants; and
 - d. detecting the transformed plants, screening the transgenic plants in which the gene silencing occurs in the target gene, and thereby obtaining the transgenic plants with high antiviral property.
- 15 2. A method for breeding transgenic plant with high antiviral property of claim 1, characterizing in that: said vectors further comprising a selective marker gene.
- 20 3. A method for breeding transgenic plant with high antiviral property of claim 1 or claim 2, characterizing in that: said rare codons are the codons with the usage frequency of 0-10%.
- 25 4. A method for breeding transgenic plant with high antiviral property of claim 1 or claim 2, characterizing in that: said vector is a prokaryotic expression vector or a eukaryotic expression vector.
5. The cell line obtained from the method of claim 1.
6. The plant obtained from the method of claim 1.
- 30 7. The use of the method according to claim 1 in plant breeding.
8. The use of the method according to claim 1 in breeding the transgenic plants with high antiviral property.